

MARCH 4.

Mr. VAUX, Vice-President, in the chair.

Twenty-six members present.

Mr. THOMAS MEEHAN exhibited a flower of *Bletia Tankervillea* (*Phaius grandiflora* of some authors), in which the dorsal sepal (or, as some authors contend, petal), had united with the column, and had been much retarded in its development accordingly. He said that he had several dozen of flowers produced in this way this winter, all however confined to separate spikes from those which bore the perfect flowers. In some cases flowers were produced which had two of the exterior petals united together perfectly, in which case they formed a hood over the apex of the column. As changes of a similar character were not uncommon in Orchidaceous plants, it was likely this form of changed structure had been seen before, though not falling within his own observation. It was usual to pass over these appearances as "monstrosities," but in truth the whole Orchid structure was little less than a monstrosity. If we except the character of the position of the seeds in the capsule, there was little to divide an Orchid from an Iris, beyond the power of combining organs which are free in the Iris—the power which produced the "monstrosity" we see. The stamens were entirely coherent with the pistil in Orchidaceous plants, and free in the Iridaceous. He had seen in a "monstrous" *Habenaria* the lip so transformed, that the whole flower had as regular an appearance as a *Sisyrinchium* in the Iridaceæ.

He did not think as much had been made out of the changes of structure in Orchids in the study of evolution, as might be, in consequence of the impression that these abnormal forms, as they were termed, were monstrosities, or the results of cultivation. There had been already on record accounts of changes in wild Orchids more remarkable than many much dwelt on by many modern writers on development. Sir Richard Schomburgk described and figured forty years ago, in the Linnaean Transactions (15th vol.), three distinct genera—*Catasetum*, *Maehranthus*, and *Myanthus*—all growing out of one plant in Demerara; and seed which he took from one of these, and scattered on a piece of rotten wood, produced plants with flowers of one of the other genera. All these facts showed that the power of cohesion of one organ with another was one of the leading forces at work in forming the Orchidaceous structure; and, as we saw in the specimen exhibited to-night, this power could be readily obstructed, so as to produce many variations, it could hardly be said that genera were founded on any absolute law.

He further remarked, that, in examining closely the flowers of *Bletia Tankervillea* early in the morning, he found on the outside, at the base of the three exterior petals, a liquid exudation from a small gland. It was highly probable that these glands were rudimentary spurs, and that, if the course of nutrition which sustained the cohering power of an Orchid could in any way be diverted before the final direction of form, each of these outer petals might take on some of the labellate character with its attendant spur, which gave such a peculiar appearance to so many Orchidaceous plants.

The death of Dr. Thos. McEuen was announced.

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MARCH 11.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-three members present.

The following papers were presented for publication:—

Descriptions of new species of marine shells inhabiting the South Sea Islands. By Andrew Garrett.

Descriptions of a new species of *Goniodoris*. By Andrew Garrett.

Descriptions of new species of land shells inhabiting the South Sea Islands. By Andrew Garrett.

Mr. THOS. MEEHAN announced the death of Dr. John Torrey, and offered the following resolutions, which were unanimously adopted:—

*Resolved*, That the Academy of Natural Sciences of Philadelphia receives with profound regret the announcement of the death of Dr. John Torrey, who for fifty years has been one of its most esteemed correspondents, and whose scientific eminence is world renowned.

*Resolved*, That, as an expression of our sense of the severe loss science suffers by his death, these resolutions be entered on the minutes, and published in the Proceedings of the Academy.